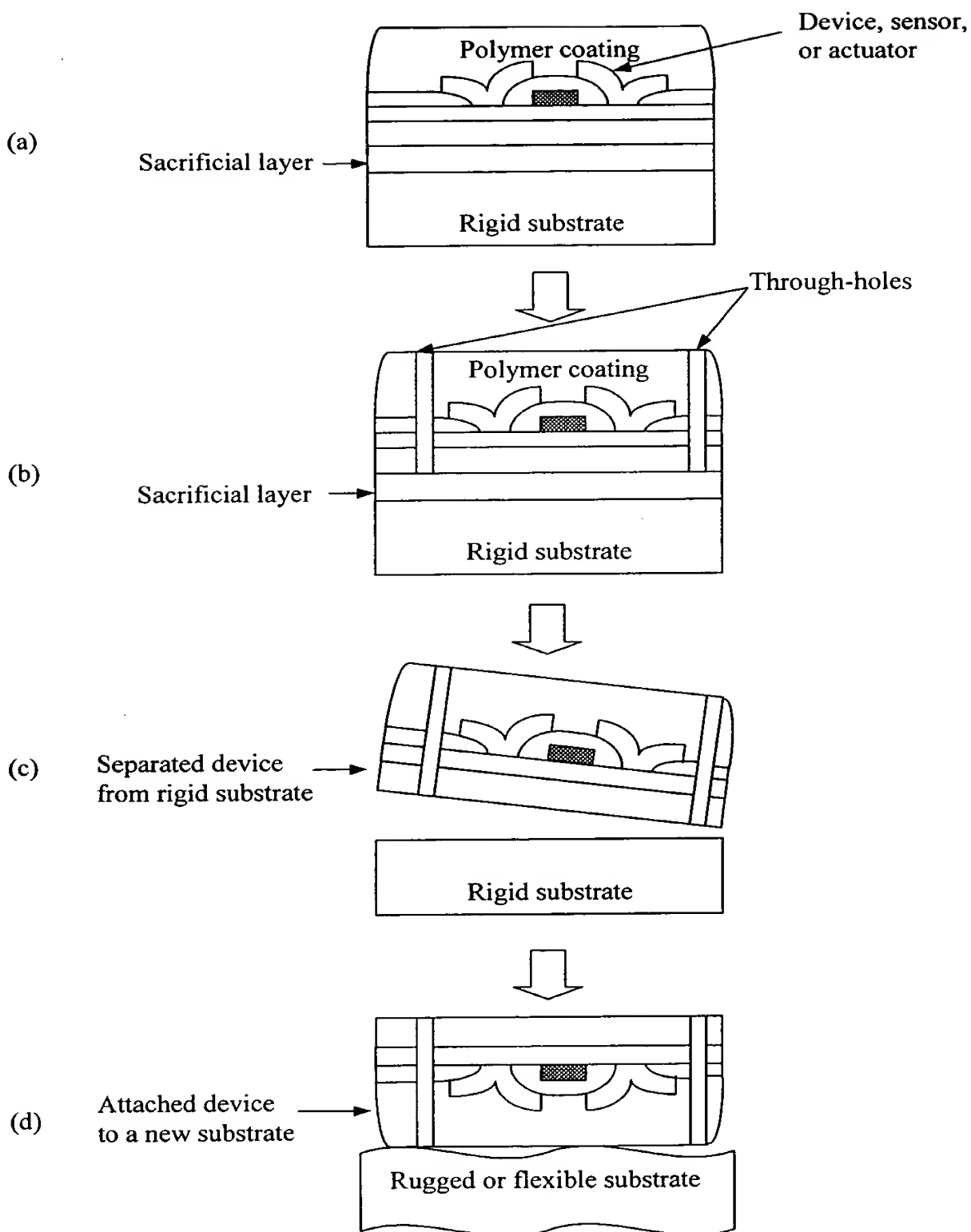


Figure 2

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[illegible]

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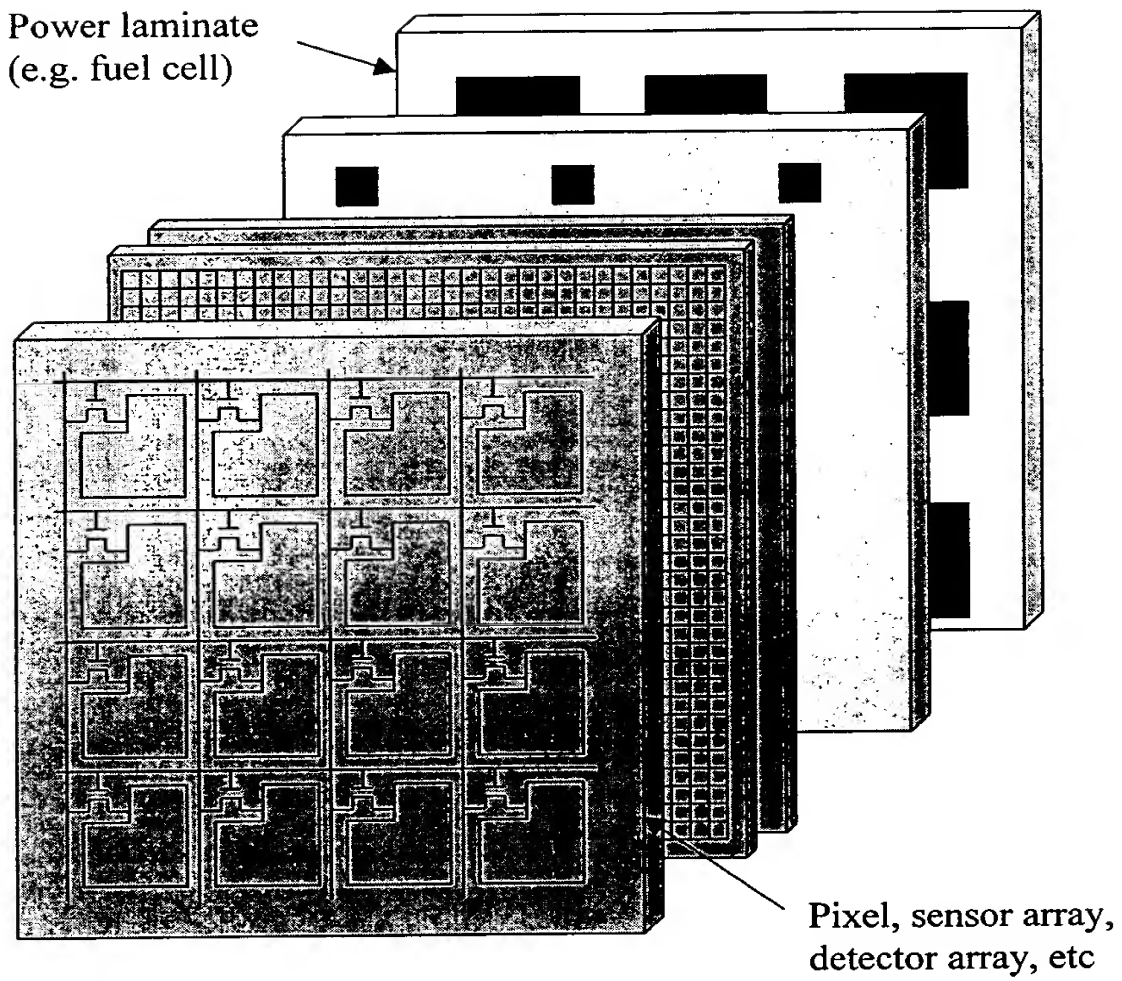


Figure 4

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(a) Sacrificial layer deposition



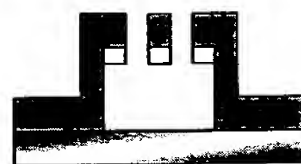
(b) Lithography and etching



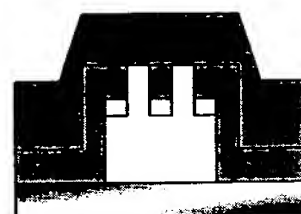
(c) Wall /capping layer deposition



(d) Wet etchant access window etching
(Holes occur as needed in top or sides for effective etching)



(e) Sacrificial layer etching



(f) Window filling



Substrate



Air (empty space)



Column/void silicon



Cap layer



Wall material

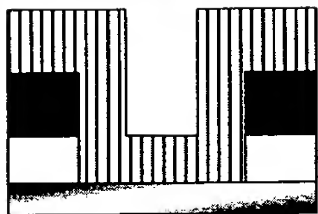
Figure 5



(a) Base layer deposition



(b) Lithography and base layer etching



(c) Sacrificial layer deposition



(d) Lift-off



(e) Capping layer deposition



(f) Wet etchant access window etching
(Holes occur as needed in top or sides for effective etching)



(g) Sacrificial layer etching



(h) Window filling



Substrate



Air (empty space)



Column/void silicon



Stencil layer

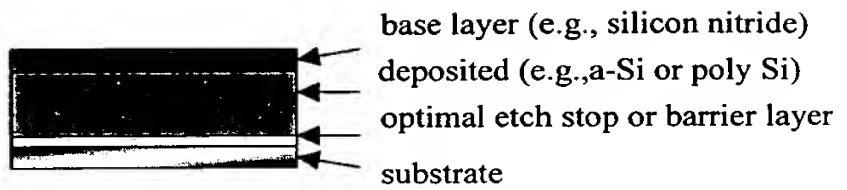


Base/wall/cap material or materials

Figure 6

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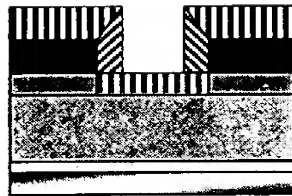
(a) Base layer deposition



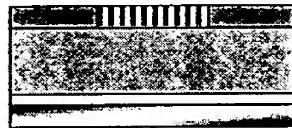
(b) Lithography and base layer etching



(c) Sacrificial layer deposition



(d) Lift-off



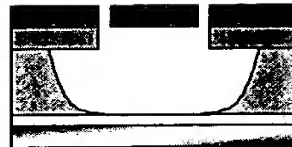
(e) Capping layer deposition



(f) Etchant access window etching



(g) Sacrificial layer etching and trench creation



(h) Window filling



Figure 7

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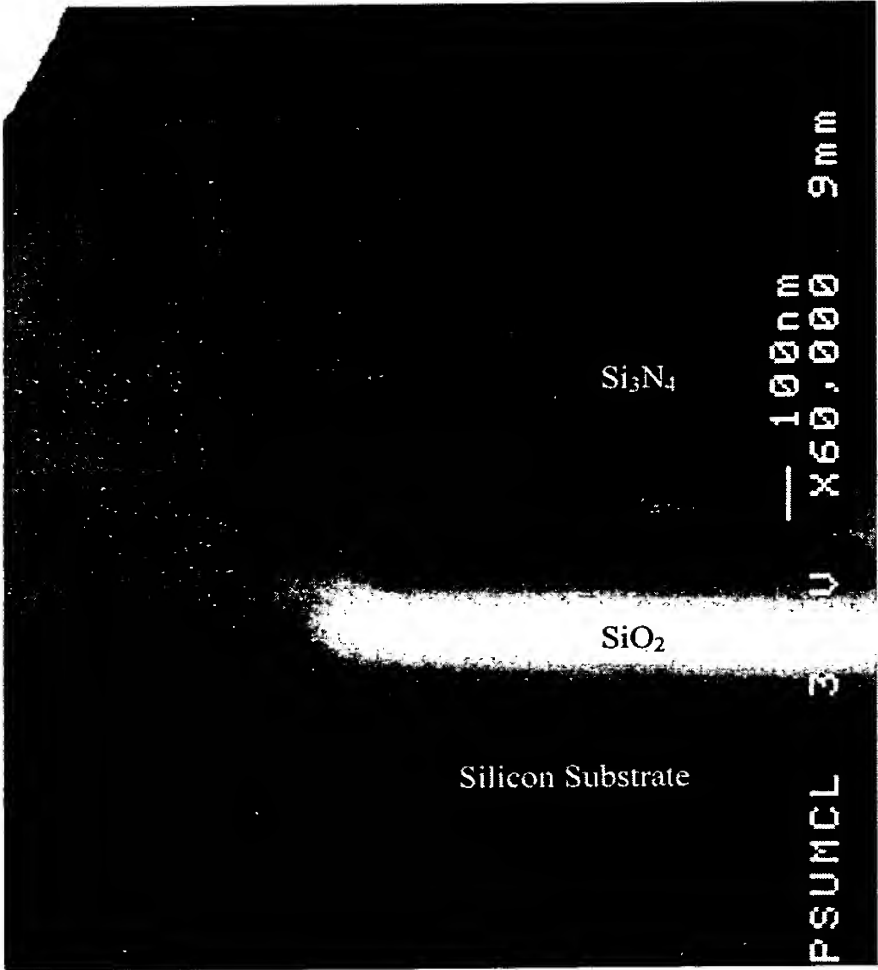
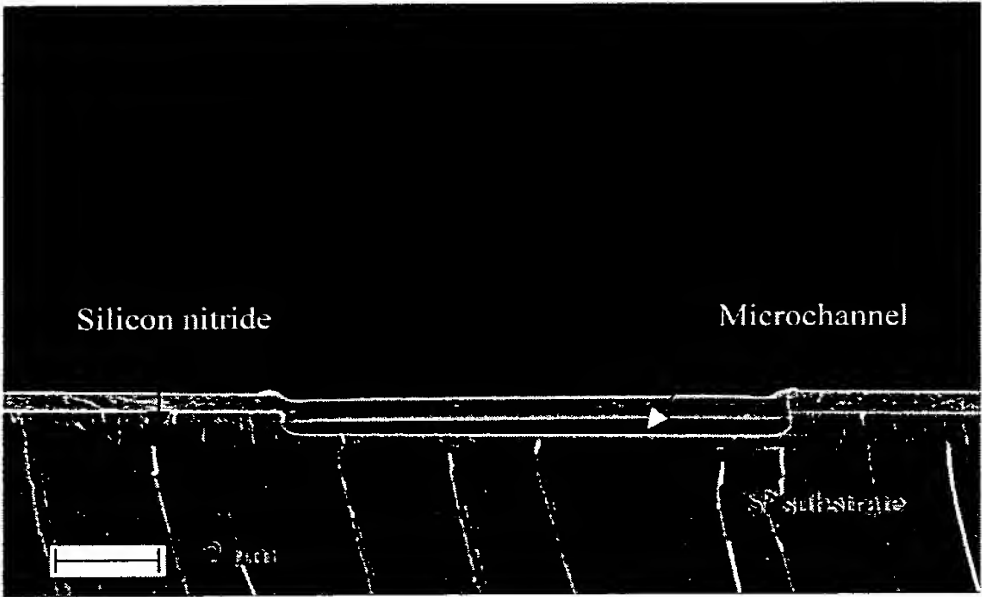


Figure 8

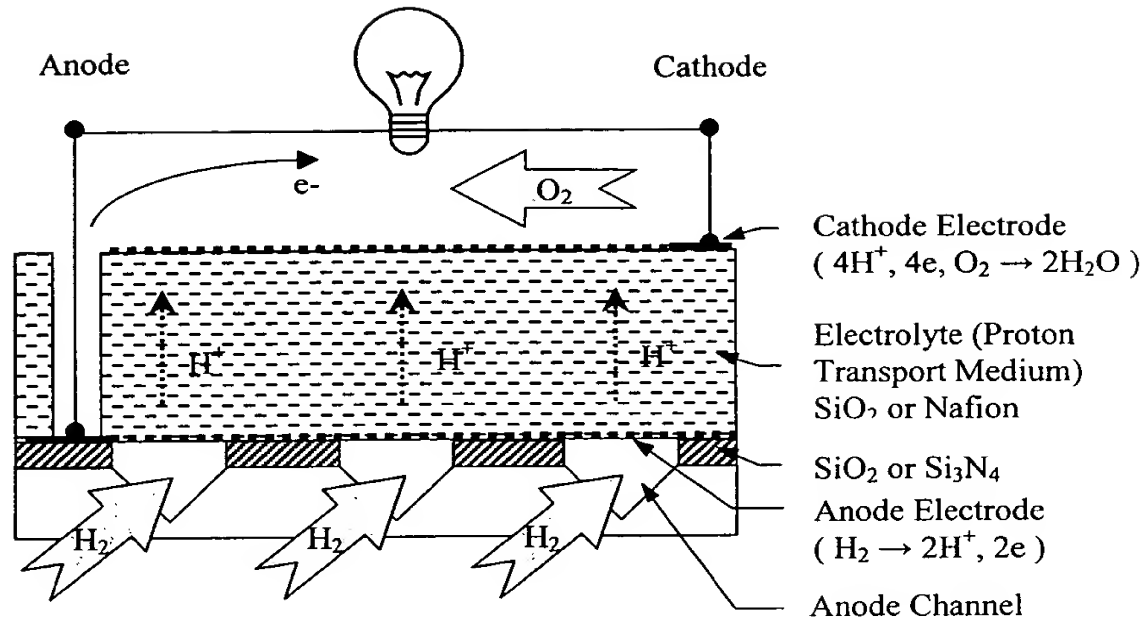


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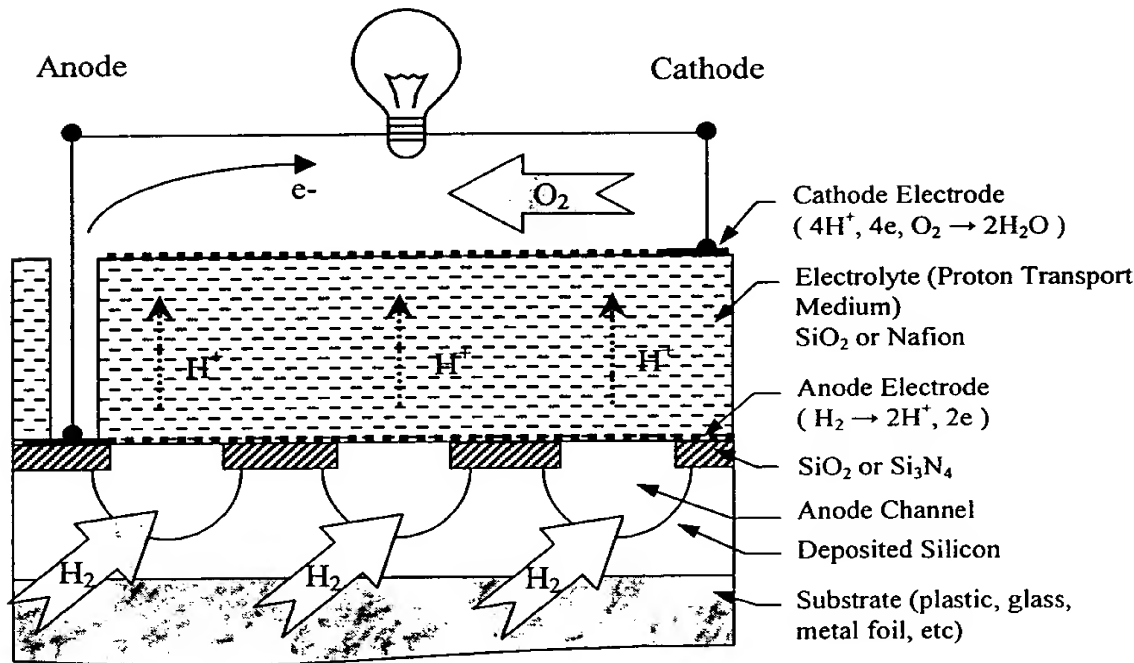
Figure 9

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(a)



(b)



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Figure 10

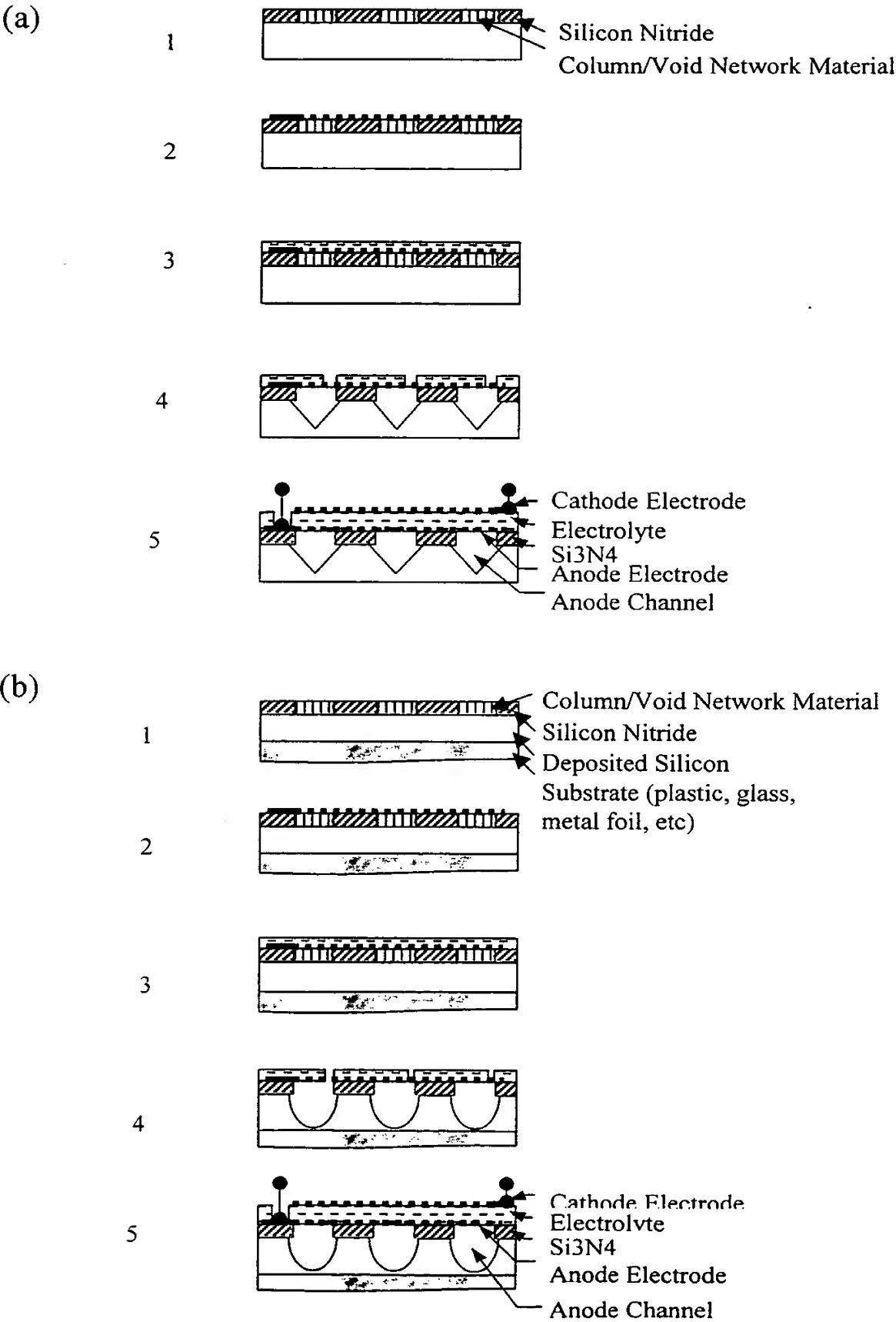
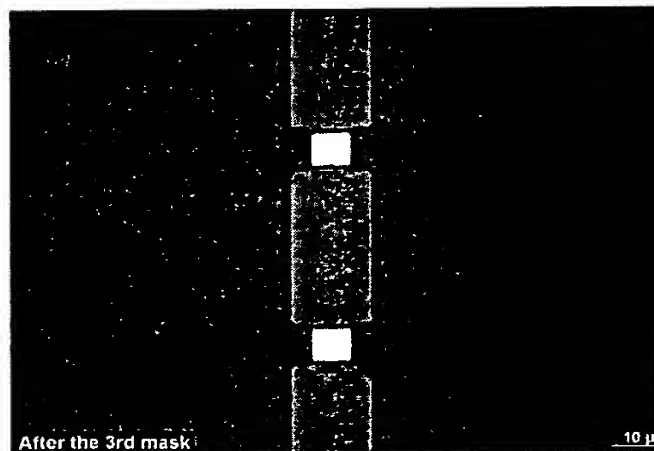
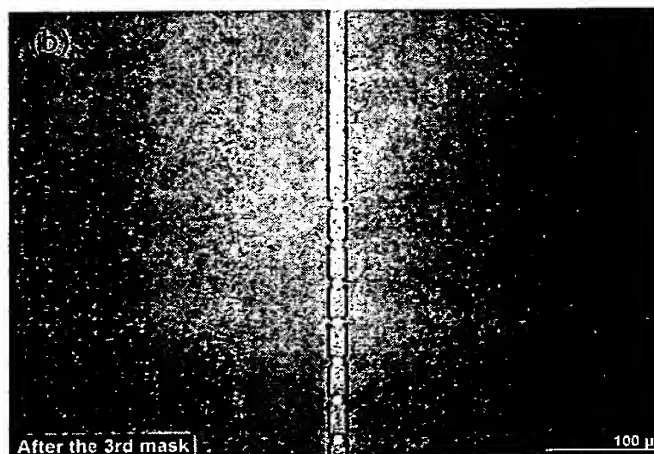
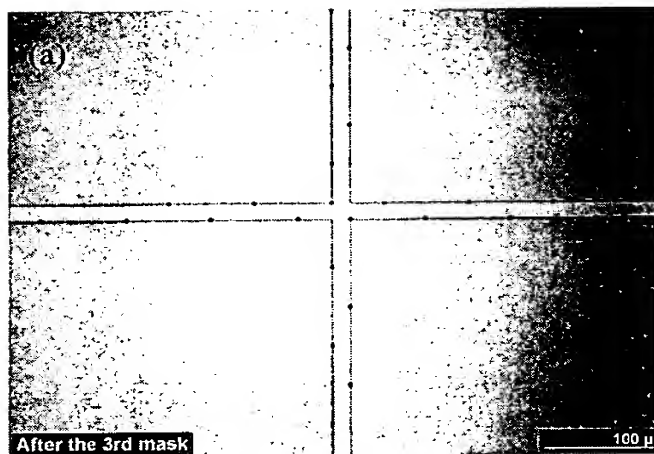


Figure 11

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Figure 12

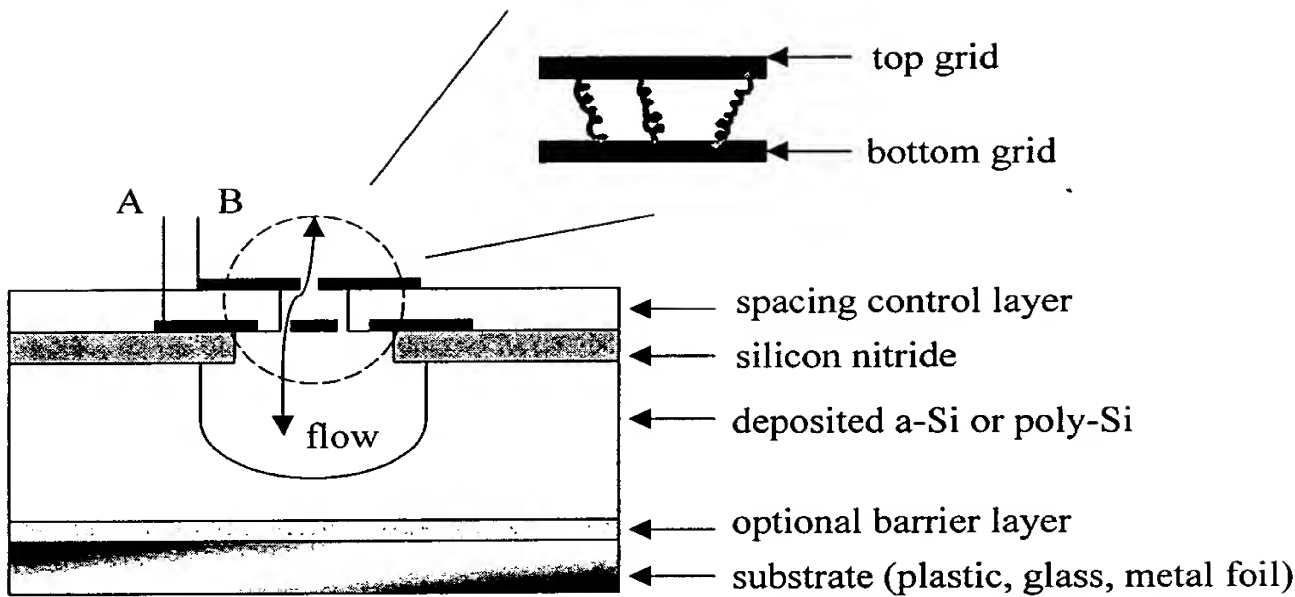


Figure 13

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(a) Cr/Au deposition



(b) Lithography and etching



(c) Column/void network material deposition



(d) Contact tip etching



(e) Beam support etching



(f) Lithography



(g) Au deposition



(h) Column/void network material etching

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